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SCIENCE

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FIFTY YEARS OF THE AMERICAN MUSEUM OF NATURAL HISTORY

It has become necessary to postpone the celebration of the fiftieth anniversary of the charter of the museum for five years, namely, until 1924. It is hoped that this celebration may be marked by the completion of the entire southern half of the museum, as planned between 1870 and 1875, as the year 1924 will mark the period of half a century since the building was actually begun by the City of New York.

In the meantime at the request of the editor of SCIENCE, there is here presented a review of certain aspects of the development of the institution during its first fifty years, based on the *Annual Report* of the president to the trustees.

The American Museum has broken away from many old museum traditions and customs and has been constantly striking out along new lines in every branch of its activity. In exploration, while making North America our chief concern, we have reached out into South America, Africa, Asia, and, in certain branches, into Europe itself. The natural history of our new colonial wards, the Philippines and Porto Rico, are matters of intimate concern. In South America, through a series of expeditions we are exploring every part of the continent and have established most cordial personal as well as scientific relations.

This is in keeping with the world-wide extension of American interests and influence and is part of the inevitable participation of America in the world's affairs. Neither the American Museum, nor our government, nor our people can remain isolated or bound by the confines of our own continent. Thus, while more than ever an *American Museum*, our institution has become a *world museum*. In increasing degree it is bringing all parts of the world within the view of the millions

of people who can never travel and never explore and whose only means of finding the inspiration of travel is through looking into the mirror which we are endeavoring to hold up to nature in all of its wonderful aspects.

A summary of the general progress in the last fifty years shows that the great museum building projected in 1870 is about one fourth completed; that during this period the trustees, members and friends of the museum have contributed gifts and collections valued at \$7,250,000, while the contributions to the permanent endowment fund have been \$7,322,707. In the meantime, the taxpayers of the City of New York have contributed \$5,318,820 for building and \$4,241,492 for maintenance. The unrestricted endowment fund, which may be devoted to the general progress of the museum, is now approximately \$1,300,000, while during the last year and a half additional bequests to the institution for general purposes amount to \$2,105,000, including Mrs. Russell Sage's bequest of \$1,600,000. It is fortunate that the full amount of these bequests will be realized through the recent action of Congress in repealing the iniquitous federal tax on educational bequests imposed by the laws of 1916 and 1917.

The financial, material and scientific accomplishments of fifty years may be summed up as follows:

Total expenditure for building by the city of New York	\$5,318,820
Total expenditure for maintenance by the city of New York	4,241,492
Total gifts to endowment by trustees, members and friends of the museum..	7,322,707
Total contributions and gifts to the collections, publications and scientific work of the museum	7,250,000
Total number of exhibition halls at the present time	35
Total exhibition area (in square feet) ..	271,886
Total number of professional or scientific staff, 1918	54
Total number of employees, 1918	340
Total number of volumes of publications issued by the museum (<i>Bulletins, Memoirs, Monographs, Special Publications</i>)	90

Total number of American Museum members, 1918	4,568
Average number of visitors annually for the last ten years	806,005
Average number of school children reached annually for the last ten years.	1,121,799

The scientific work of the museum has been well provided for through the munificent bequests of Mr. and Mrs. Morris K. Jesup. By the terms of Mr. Jesup's will his bequest was strictly for the benefit of scientific exploration, research, preparation, exhibition and publication. The educational work of the museum, the contact with the public and the relations with the public schools are all inspired by this purely scientific work, yet they can not legitimately draw support from the Jesup Endowment. It is therefore to general endowment that we look for the means to extend this service to the people.

It is very gratifying to report that during the past three years several important gifts or bequests to the general endowment have been received, as follows:

Margaret Olivia Sage, special endowment for Ornithology	\$10,000
Emil C. Bondy	10,000
Anson W. Hard, for the development of the Library	5,000
Charles E. Rhineland (estimated)	20,000
Amos F. Eno	250,000
Helen C. Juilliard	50,000
David Lydig (contingent)	10,000
Emil Wolff (stock value)	5,000
Ludwig Dreyfus	10,000
Louisa Combe (estimated)	50,000
James Douglas	100,000
Margaret L. Baugh, for Anthropology...	10,000
Mrs. Russell Sage (estimated)	1,600,000
	<u>\$2,130,000</u>

Even if the museum should realize full value on all these bequests, the added income would be little more than sufficient to meet the present general running expenses, for the personal cash contributions of the trustees annually almost equal the income on \$1,000,000, while the deficiency of the city maintenance appropriation is more than the interest on a one-million-dollar endowment. Conse-

quently, while these noble bequests swell the general endowment to more than \$3,000,000, an additional \$2,000,000 is required to put the museum on a secure financial footing for its general purposes.

The munificent bequest of Mrs. Russell Sage is by far the largest which the museum has received for its general purposes. It was accompanied by the following provision in Mrs. Sage's will:

It is my desire that each religious, educational or charitable corporation which may receive a share of my residuary estate shall use the whole or part of the legacy received by it for some purpose which will commemorate the name of my husband, but I simply express this as a desire and do not impose it as a condition of my gift.

The institution should be maintained in the future in the spirit of the contract of 1878 between the museum and the city, namely, that the city pay for the operating expenses, while the trustees pay for the collections and all the scientific work. In recent years the trustees have drawn so largely upon their own funds for maintenance purposes that the growth of the scientific collections and exhibitions has been held back, with the result that the people of the City of New York are the ultimate sufferers. Through a like policy, the New York Public Library and the Metropolitan Museum of Art are making similar inroads on the income from their endowment funds to meet current expenses, instead of purchasing books, pictures and works of art; in the end this means the deprivation of the people.

The expenditures for the maintenance of the museum by the people have increased far less rapidly than the expenditures of the city departments under political management: while the *per capita* cost of the city government has *increased* more than 30 per cent. in the last twenty years, the *per capita* cost of maintenance of the museum has *decreased* 8 per cent. Inasmuch as the work of the museum for the education of the people is in no sense a luxury, it is reasonable to expect that maintenance costs shall increase proportionately with the costs of the city government.

In general we may regard the reduction of the maintenance appropriation for the museum as in reality a reduction of expenditures for education, and any city with the wealth of New York ought to provide liberally for education. At the present time the taxpayers of the City of New York are paying less than one third of the annual cost of the American Museum and its work. If the taxpayers really understood the situation, they would support the city government in granting larger maintenance appropriations.

Although the field exploration of the museum was in general suspended until after the war, it was found expedient to continue on a small scale certain explorations in China as well as in various parts of North and South America.

The year 1918, however, has been one of the most active in the entire history of the museum in research and in publication, which is mainly supported through the generous provision of the Morris K. Jesup Fund. This fund now amounts to \$6,672,000.

In zoology, Mr. Roy C. Andrews sailed for China on June 28 to take up the work of the Second Asiatic Zoological Expedition. Mr. Andrews will make studies and collections in the Gobi Desert, a region little known to the naturalist. The Third Asiatic Zoological Expedition left San Francisco on July 27, under the leadership of Mr. Paul J. Rainey, accompanied by Mr. Edmund Heller as naturalist; the entire expense of the expedition was borne by Mr. Rainey.

In anthropology, Mr. Earl H. Morris, assisted by Mr. B. T. B. Hyde, continued the excavation of the Indian ruins at Aztec, New Mexico. These ruins are yielding valuable collections and historic data, which make this piece of research work one of the most important that the museum has ever undertaken in anthropology. These explorations are made possible through the contributions of Mr. Archer M. Huntington. Mr. Leslie Spier made archeological explorations in Arizona, visiting the Fort Apache Indian Reservation in the White Mountains, and the Rio Verde Valley. He also visited the Havasupai

Indians for the purpose of making ethnological studies and collections. Dr. Herbert J. Spinden returned in December from an expedition of eighteen months in Central America and the United States of Colombia. His work was entirely successful, especially along the lines of decorative art, in which connection he secured important archeological and ethnological collections.

In marine zoology, during the summer, Mr. Roy W. Miner and other members of the Department of Invertebrate Zoology spent several weeks at Woods Hole, Mass., making field studies for the Bryozoan Group for the Darwin Hall.

In paleontology, Mr. Walter Granger completed the exploration of the Huerfano Basin, Colorado, and secured a very interesting fauna, which links up the Lower Eocene and the Middle Eocene. Three months were spent by Mr. Albert Thomson in exploration of the Snake Creek deposits in western Nebraska, where he obtained a considerable number of fossil mammals, including skulls of a very large rhinoceros and a rare and interesting rodent.

It is an auspicious coincidence that the first volume of the publications of the American Museum Congo Expedition appears at the time of the release of Belgium from the oppression of war, and that the museum is in a position to send to the Belgian government a report on the achievements of the Congo Expedition, which, it will be recalled, was instituted with the financial and political support of the Belgian government in 1908. It is proposed to publish these reports under the general title, *Zoology of the Belgian Congo*, and to issue a series of eight to ten volumes composed of articles contributed to current numbers of the American Museum Bulletin by members of the museum staff and by other foremost naturalists and specialists of this country. When the various groups of animals are fully reported on, the reports will be gathered into volumes according to their taxonomic groups, that is, the papers on mammals will be published together, the papers on birds, and so forth.

The statistics of the numbers reached by the museum through its extensional system show a total of 1,528,523, a falling off of approximately 500,000 since 1914 owing to war conditions. The museum has become a center for all the natural history work carried on by various organizations in the New York area; it supplies materials for all grades of education, from the pupils of the kindergarten to the most advanced investigators in the research departments of Columbia and other universities. Among the societies and organizations that visited or held meetings at the museum in 1918 were:

American Association for the Advancement of Science, Section E.

American Ethnological Society.

American Nature Study Society.

American Ornithologists' Union.

American Scenic and Historic Preservation Society.

Angle School of Orthodontia, Eastern Association of Graduates.

Aquarium Society.

British Educational Mission to the United States.

Catherine Abbé Club.

Chautauqua Bird and Tree Club.

City History Club.

Columbia University, Classes in Anthropology, Zoology and Paleontology.

Department of Education, New York City, free public lecture courses.

Elsie Rutgers Club.

DeWitt Clinton High School.

Galton Society for the Study of the Origin and Evolution of Man.

Horticultural Society of New York.

Inkova Club.

Joan of Arc Club.

Keramic Society of Greater New York.

Linnæan Society of New York.

Massachusetts Normal Art Alumni Association, New York Chapter.

Mission of French Scholars.

New York Academy of Sciences.

New York Bird and Tree Club.

New York Entomological Society.

New York Microscopical Society.

New York Mineralogical Club.

School Nature League.

Torrey Botanical Club.

The development of the museum during the next five years in preparation for its golden jubilee will, it is hoped, include three great features, namely, extension of building, firm foundation of popular municipal maintenance, and increase of the general or unrestricted endowment fund to \$5,000,000, the amount needed to place the museum on a financially sure foundation for the coming quarter of a century.

HENRY FAIRFIELD OSBORN

HERBERT HUNTINGTON SMITH

THE wide circle of his friends and acquaintances were shocked to read in the daily journals that on March 22 Mr. Herbert Huntington Smith, the curator of the Alabama Museum, had been killed by being run over by a freight train. In recent years he had become very deaf, and it was owing to this infirmity that he came to his untimely end. Once before, in the city of Pittsburgh, he had been struck by an electric car, the approach of which he had not observed, but fortunately escaped at that time, with only a few bruises.

A number of years ago Lord Walsingham in an address before the Entomological Society of London in speaking of the work of field naturalists and the additions made by them to the sum of human knowledge, made the statement that the two ablest collectors were Americans, one of them the late William H. Doherty, the other Herbert Huntington Smith. With both of these men the writer of these lines was intimately associated, both of them having made extensive collections for him in foreign parts, and both came to their end under tragic circumstances. Doherty died in Uganda, as the result of nervous prostration brought about partly by exposure, partly by the fact that his camp was haunted by man-eating lions, which had killed several of his assistants. Smith passed away in the midst of important activities, as the result of a horrible accident.

My acquaintance with Mr. Herbert Huntington Smith, which has covered nearly thirty years of his life, enables me to speak of him with an appreciation founded upon intimate knowledge.

He was born at Manlius, New York, on January 21, 1851. He studied at Cornell University from 1868 to 1872. In 1870 he accompanied his friend and teacher, the late Professor C. F. Hartt, on an excursion to the Amazons. He thus caught his first glimpse of tropical life, which wove about him a spell which always thereafter bound him.

In 1874 he returned to Brazil for the purpose of collecting and studying the fauna of the Amazonian regions. Two years were spent in the neighborhood of Santarem, and subsequently he passed a year in explorations upon the northern tributaries of the Amazons and the Tapajós, after which he stayed about four months in Rio de Janeiro. Returning to the United States he was commissioned by the Messrs. Scribner to write a series of articles upon Brazil for their magazine, and accordingly made two more trips to that country, studying the industries, social and political conditions, and investigating the famine district in Ceará. On one of these journeys he was accompanied by Mr. J. Wells Champney, who was employed to prepare illustrations for his articles. One of the results of these journeys was the volume entitled "Brazil, the Amazons and the Coast," which was issued by Charles Scribner's Sons in 1879. On October 5, 1880, Mr. Smith married Miss Amelia Woolworth Smith, of Brooklyn, New York. She entered with zest into his labors, and in all the years which followed was his devoted and most capable assistant. There was a remarkable accord in their tastes and Mrs. Smith developed unusual skill and efficiency in the manipulative processes involved in collecting specimens of natural history. Indeed, it is no exaggeration to say that her learned husband would not have been able to accomplish the vast amount of work, which was achieved in later years, had it not been for her facile fingers. She became an accomplished taxidermist, and was able to prepare the skins of birds and preserve insects, in the most approved manner. Mr. Smith and his wife spent the years from 1881 to 1886 in Brazil. He made his general headquarters in Rio de Janeiro, where he received much encourage-